

## AMENDMENTS TO THE CLAIMS

Please cancel Claims 1, 31, 32, and 33 without prejudice.

Please amend the claims as follows.

1. (Canceled)
2. (Currently Amended) The antenna structure as claimed in claim 1 34, wherein the electrically-conductive direct feed structure extends from the upper surface of the dielectric substrate and directly contacts the dielectric pellet.
3. (Previously Presented) The antenna structure as claimed in claim 2, wherein the electrically-conductive direct feed structure physically supports the dielectric pellet.
4. (Previously Presented) The antenna structure as claimed in claim 2, wherein the dielectric pellet is elevated above the groundplane or the dielectric substrate by a low permittivity antenna support structure.
5. (Currently Amended) The antenna structure as claimed in claim 1 34, wherein the electrically-conductive direct feed structure is selected from a group consisting of: a conducting leg, a spring-loaded pin, a metal strip or a metal ribbon.
6. (Currently Amended) The antenna structure as claimed in claim 1 34, wherein the electrically-conductive direct feed structure is directly attached to at least one side or surface of the dielectric pellet.
7. (Previously Presented) The antenna structure as claimed in claim 6, wherein the electrically-conductive direct feed structure is directly attached to more than one side or surface of the dielectric pellet.

8. (Previously Presented) The antenna structure as claimed in claim 7, wherein the dielectric pellet is contained in an electrically-conductive cup or cage, and wherein the electrically-conductive direct feed structure is electrically connected to the cup or cage.

9. (Currently Amended) The antenna structure as claimed in claim 4 34, wherein at least one side or surface of the dielectric pellet is metallised, and wherein the electrically-conductive direct feed structure is soldered or otherwise electrically connected to the metallised side or said surface.

10. (Currently Amended) The antenna structure as claimed in claim 4 34, wherein the electrically-conductive direct feed structure is a spring-loaded pin extending upwardly from the upper surface of the dielectric substrate, wherein the dielectric pellet has a metallised underside that faces the upper surface of the dielectric substrate, and wherein a tip of the spring loaded pin electrically contacts the metallised underside.

11. (Currently Amended) The antenna structure as claimed in claim 4 34, wherein the radiating antenna component is an electrically-conductive antenna component.

12. (Previously Presented) The antenna structure as claimed in claim 11, wherein the radiating antenna component is selected from a group consisting of: patch antenna, slot antenna, monopole antenna, dipole antenna, planar inverted-L antenna and planar inverted-F antenna.

13. (Currently Amended) The antenna structure as claimed in claim 4 34, wherein the radiating antenna component is a dielectrically loaded antenna component.

14. (Previously Presented) The antenna structure as claimed in claim 13, wherein the radiating antenna component is configured as a planar inverted-L antenna with a radiating structure extending over a block of dielectric material such as a dielectric ceramic material.

15. (Cancelled)

16. (Cancelled)

17. (Currently Amended) The antenna structure as claimed in claim 1 34, wherein the radiating antenna component is provided with an independent feed.

18. (Previously Presented) The antenna structure as claimed in claim 17, wherein the radiating antenna component is a planar inverted-F antenna.

19. (Currently Amended) The antenna structure as claimed in claim 1 34, further comprising at least one additional radiating antenna component having a second surface that faces a surface of the dielectric pellet.

20. (Currently Amended) The antenna structure as claimed in claim 1 34, comprising a plurality of dielectric pellets.

21. (Currently Amended) The antenna structure as claimed in claim 1 34, wherein the groundplane is located on the lower surface of the dielectric substrate.

22. (Currently Amended) The antenna structure as claimed in claim 1 34, wherein the groundplane is located on the upper surface of the dielectric substrate.

23. (Currently Amended) The antenna structure as claimed in claim 1 34, wherein a first groundplane is located on the upper surface of the dielectric substrate and a second groundplane is located on the lower surface of the dielectric substrate.

24. (Currently Amended) The antenna structure as claimed in claim 1 34, wherein the groundplane is sandwiched between the upper and lower surfaces of the dielectric substrate.

Applicants: IELLICI, Devis et al.

Serial Number: 10/582,641

Attorney Docket: P-8883-US

Page 8

25. (Currently Amended) The antenna structure as claimed in claim 1 34, wherein the groundplane extends across at least that part of the dielectric substrate that is located directly below the elevated dielectric pellet.

26. (Currently Amended) The antenna structure as claimed in claim 1 34, wherein the groundplane extends across substantially an entire area of the dielectric substrate.

27. (Currently Amended) The antenna structure as claimed in claim 1 34, wherein the groundplane is absent from an area of the dielectric substrate that is located below the dielectric pellet.

28. (Currently Amended) The antenna structure as claimed in claim 1 34, wherein a gap defined between the dielectric pellet and the upper surface of the dielectric substrate is filled with a solid dielectric filler with a dielectric constant less than the dielectric constant of the dielectric pellet.

29. (Previously Presented) The antenna structure as claimed in claim 28, wherein the solid dielectric filler has a dielectric constant not more than 10% of the dielectric constant of the dielectric pellet.

30. (Cancelled)

31. (Canceled)

32. (Canceled)

33. (Canceled)

34. (New) An antenna structure comprising at least one feeding component formed as a dielectric ceramic pellet provided with an electrically conductive direct feed structure in direct electrical contact with the pellet, and further comprising at least one radiating

Applicants: IELLICI, Devis et al.

Serial Number: 10/582,641

Attorney Docket: P-8883-US

Page 9

component having a conductive element as a radiator, the at least one radiating component including a ground connection,

wherein said pellet and said radiating component are adapted such that when the antenna structure is mounted on the upper surface of a dielectric substrate having an upper surface, a lower surface, and a groundplane,

the pellet is elevated above the upper surface of the dielectric substrate so that the pellet does not directly contact the dielectric substrate or the groundplane,

the radiating component is elevated above the upper surface of the dielectric substrate and has a surface that faces a surface of the pellet, and

an air gap or other dielectric spacer material is provided between the pellet and the radiating component.

35. (New) An antenna structure comprising a dielectric ceramic pellet and a dielectric substrate with upper and lower surfaces and at least one groundplane, wherein the dielectric ceramic pellet is provided with an electrically-conductive direct feed structure that is in direct electrical contact with the dielectric ceramic pellet, and wherein the antenna structure additionally comprises a radiating antenna component having a conductive element as a radiator, wherein the dielectric ceramic pellet is elevated above the upper surface of the dielectric substrate so that the dielectric ceramic pellet does not directly contact the dielectric substrate or the groundplane, and wherein the radiating antenna component is elevated above the upper surface of the dielectric substrate and has a surface that faces a surface of the dielectric ceramic pellet.